

FIG. 1

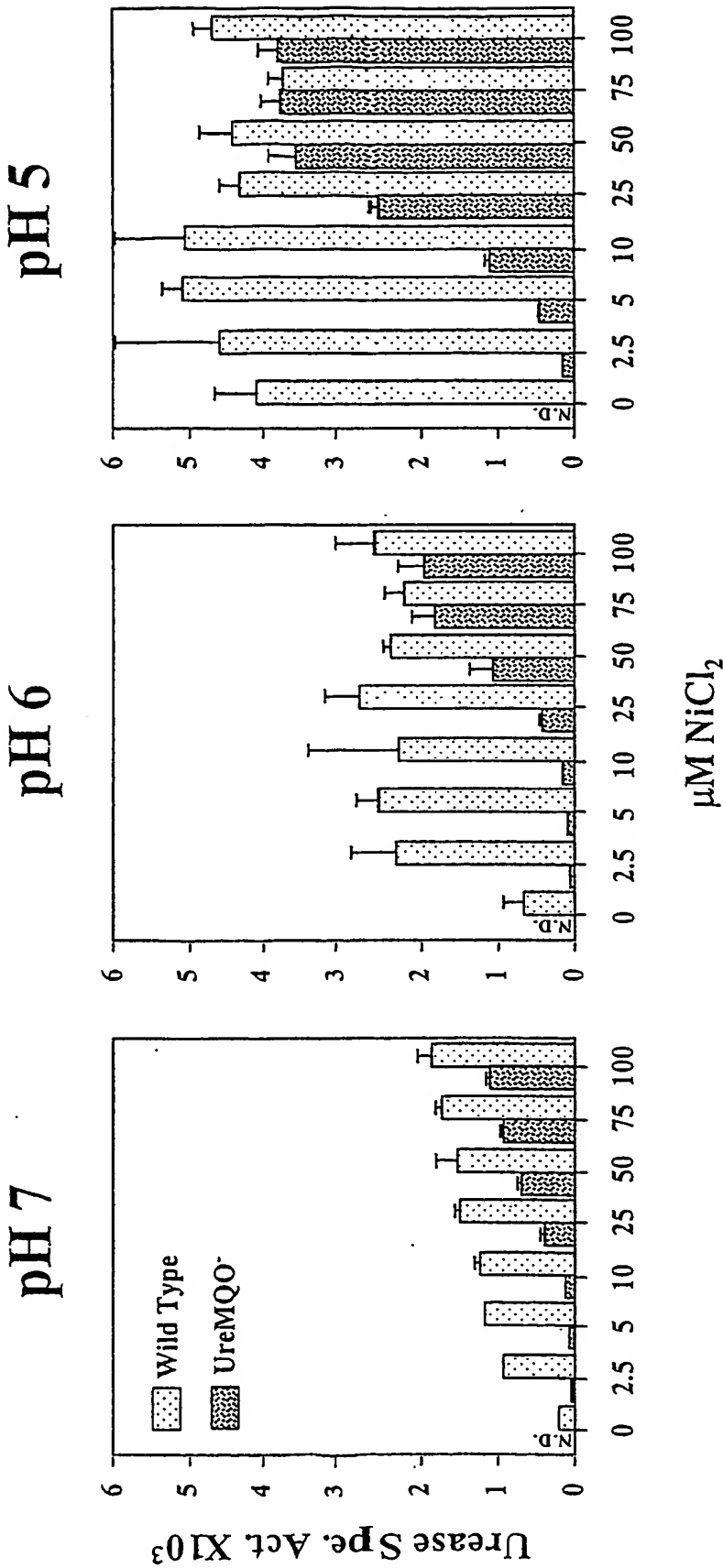


FIG. 2

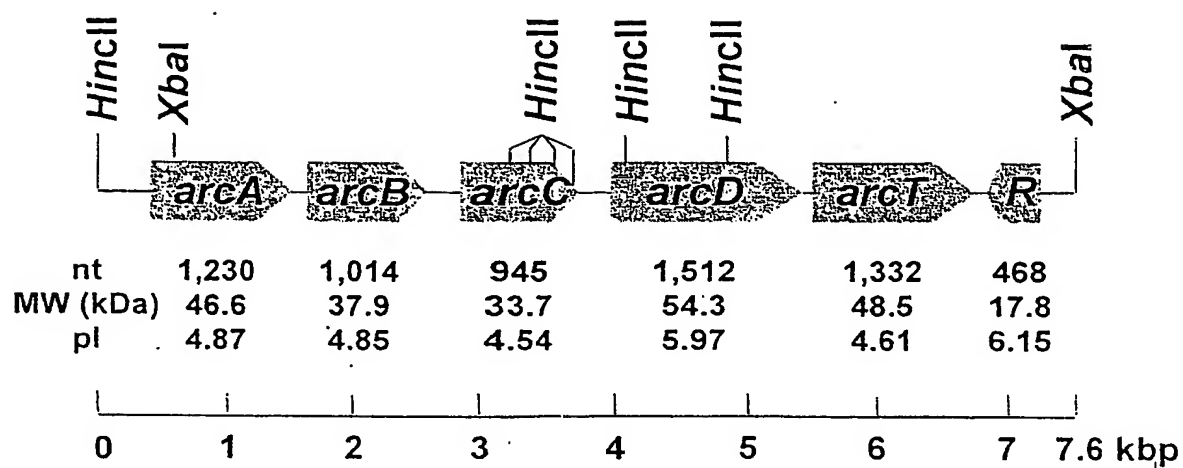


FIG. 3

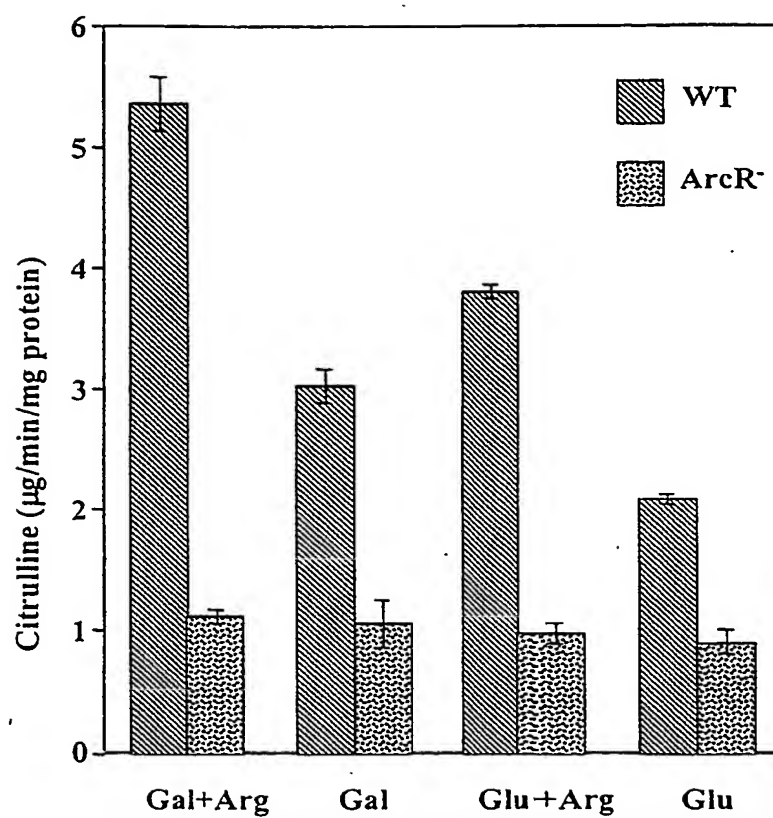


FIG. 4

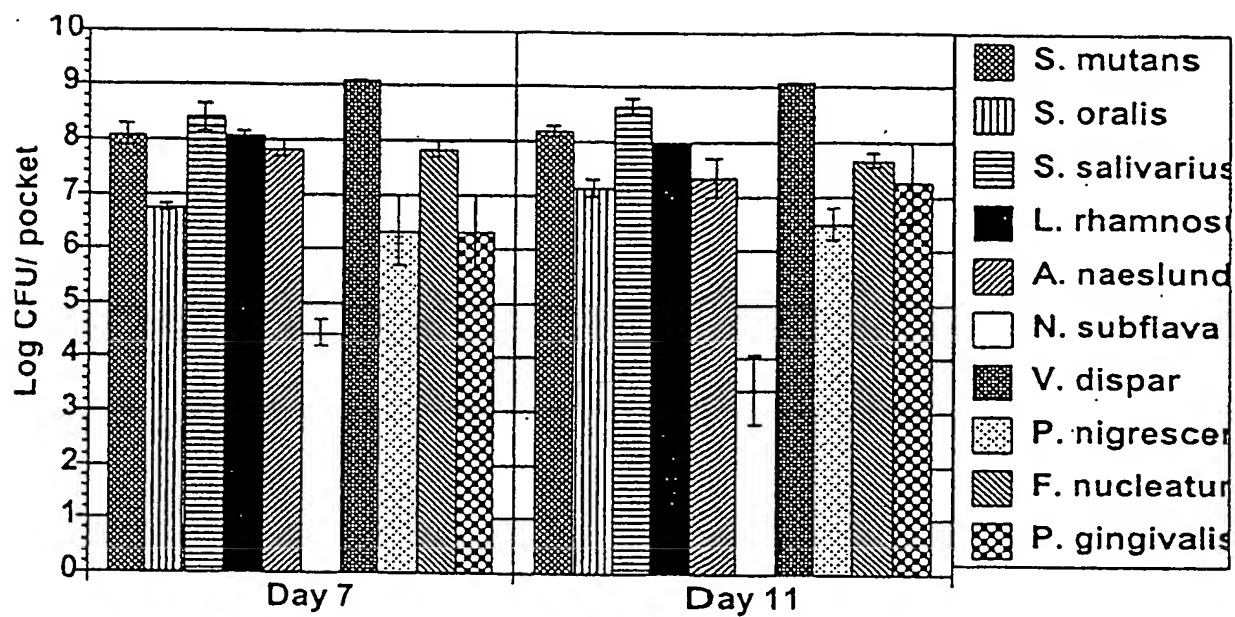


FIG. 5

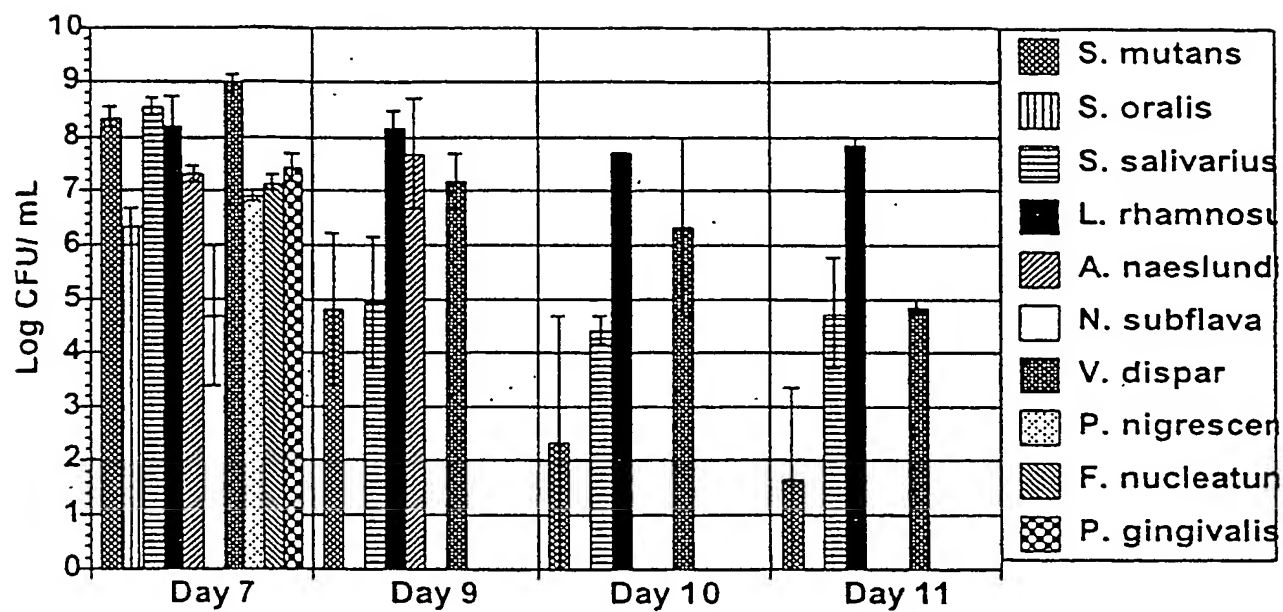


FIG. 6

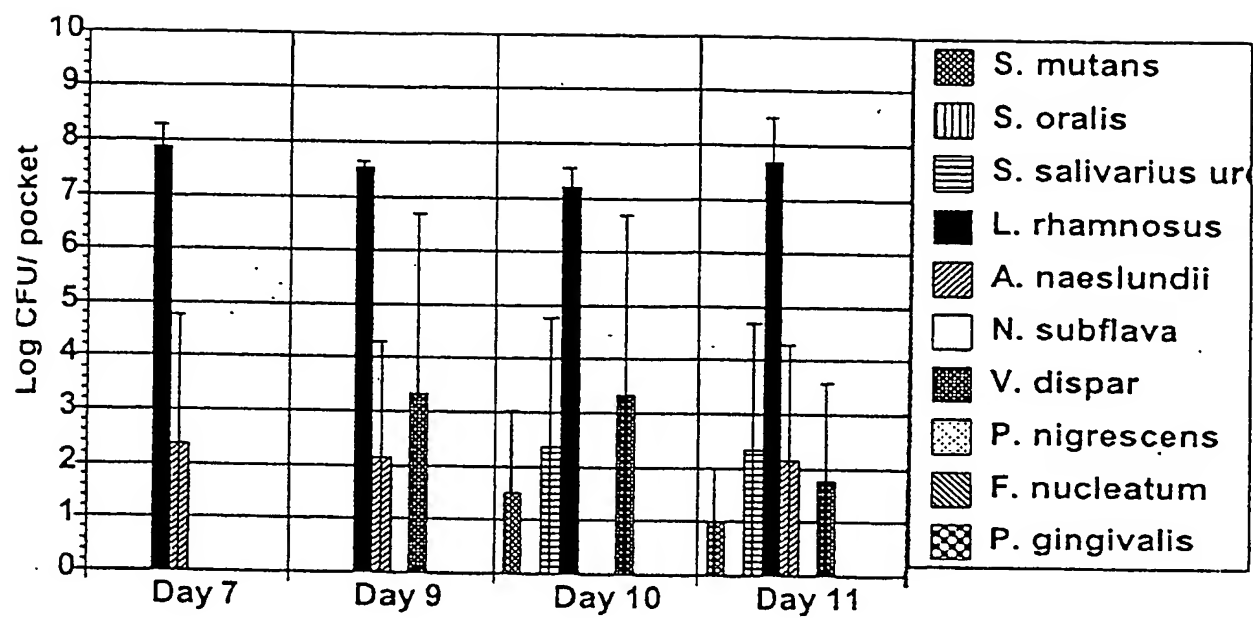


FIG. 7

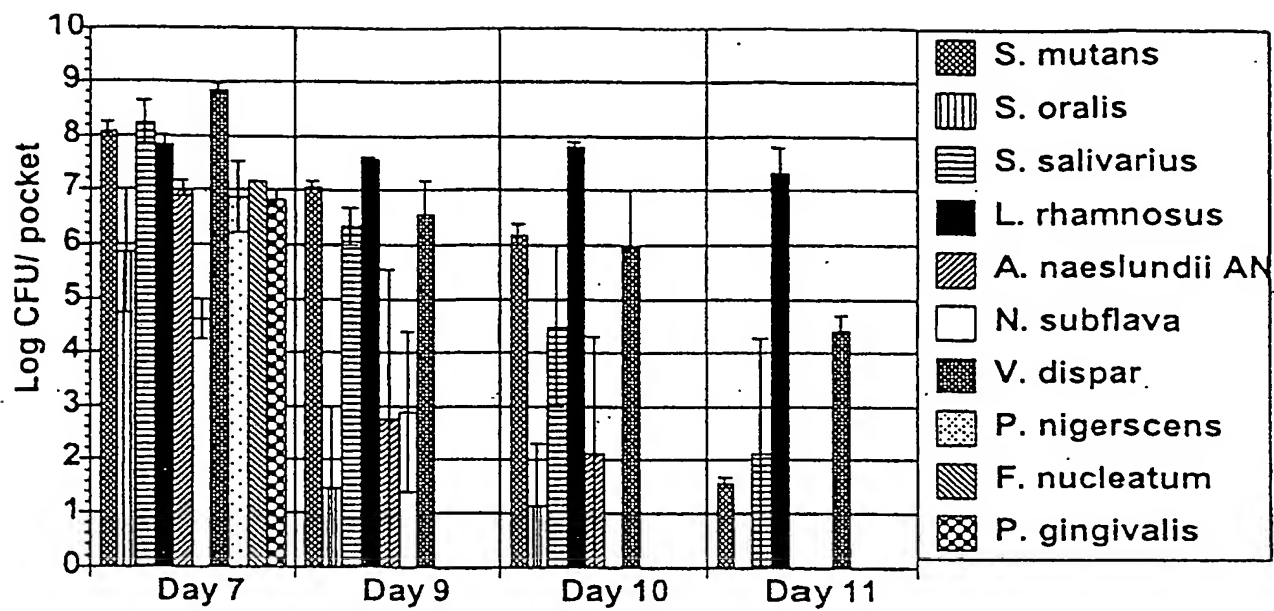


FIG. 8

An Integration Vector for *Streptococcus gordonii* DL1

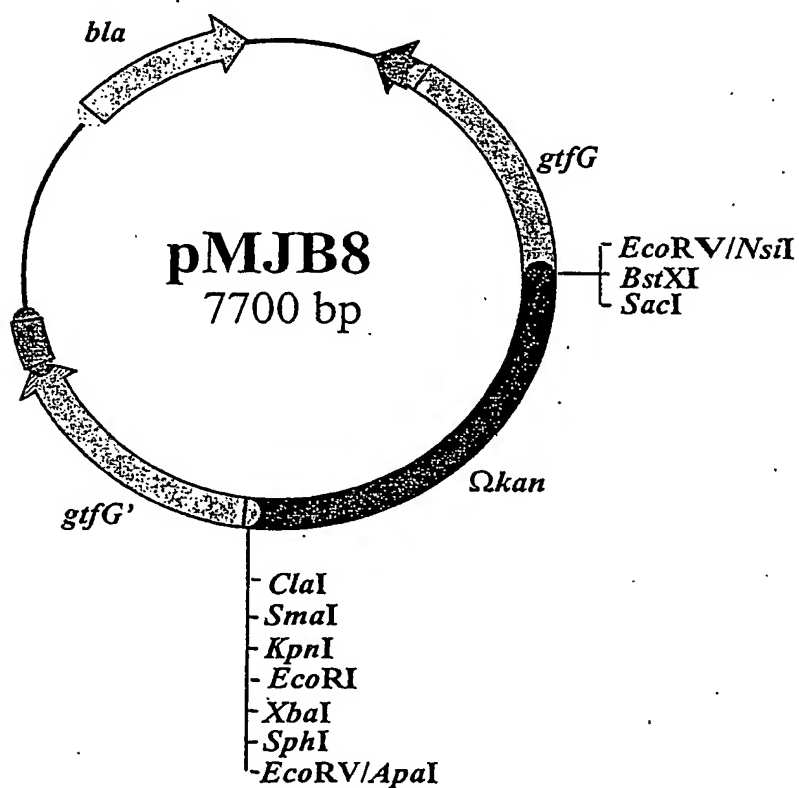
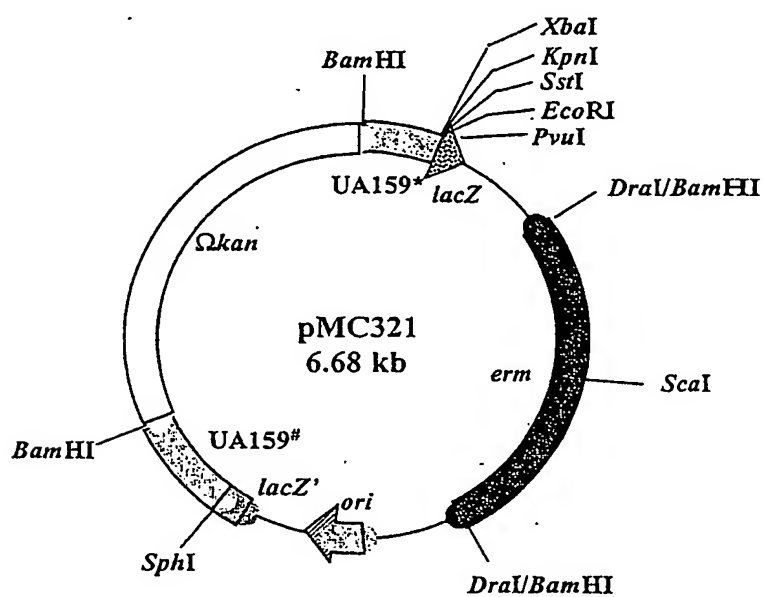


FIG. 9

An Integration vector for *Streptococcus mutans* UA159

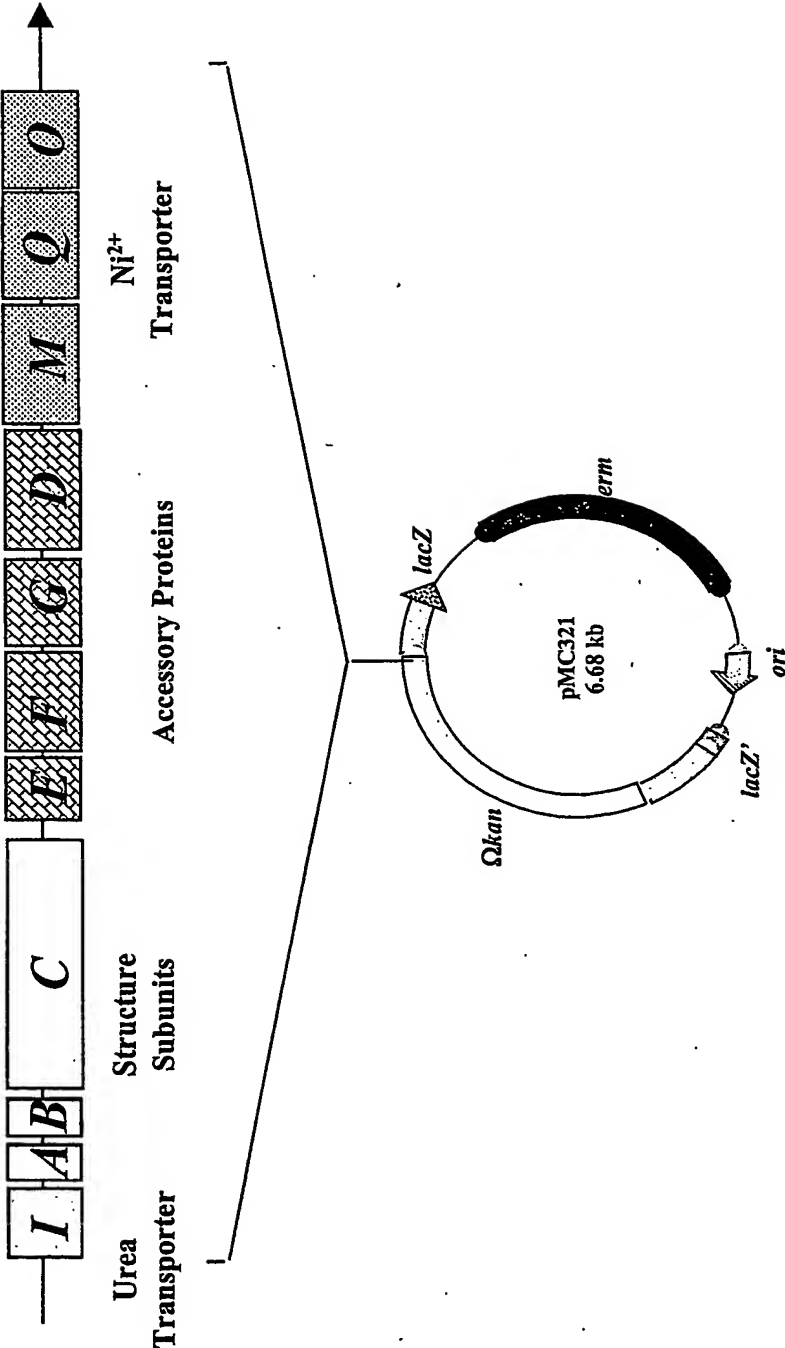


#, intergenic region between *Streptococcus mutans* UA159 *glmS* and *mtlA1*.

*, intergenic region between *mtlD* and *phnA*.

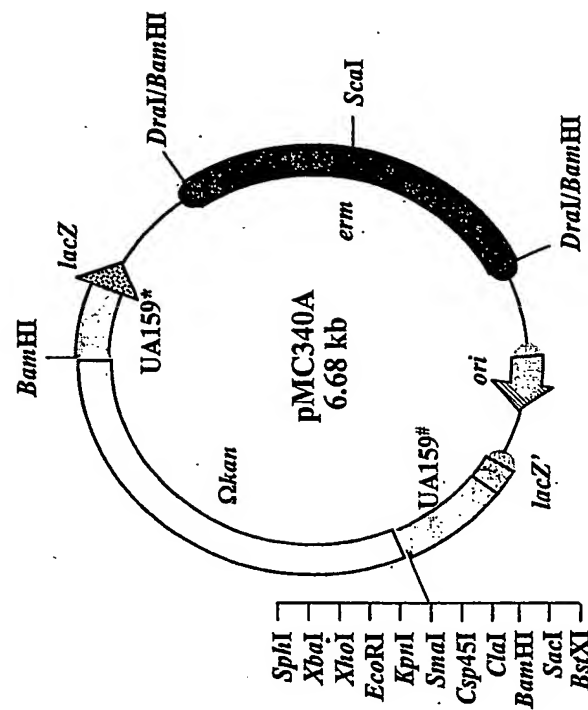
FIG. 10

Streptococcus salivarius 57.I ure cluster



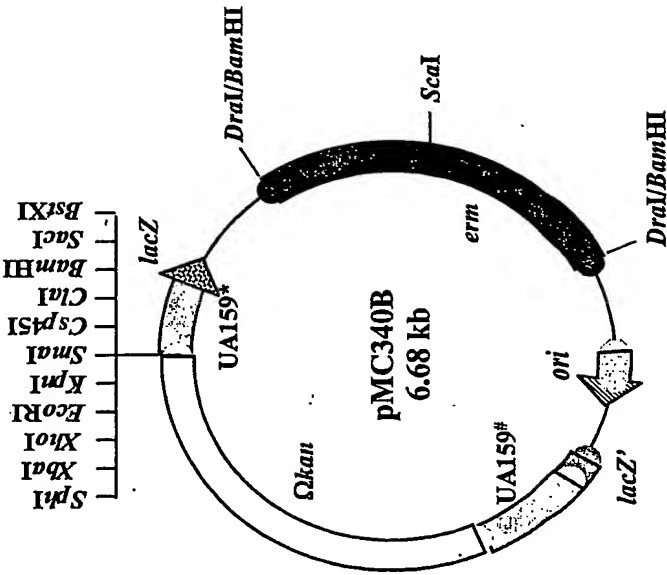
Reconstructed urease gene cluster from *S. salivarius* 57.I
FIGURE 11

Novel cloning vectors for introduction of foreign DNA into the mannitol locus of *Streptococcus mutans*



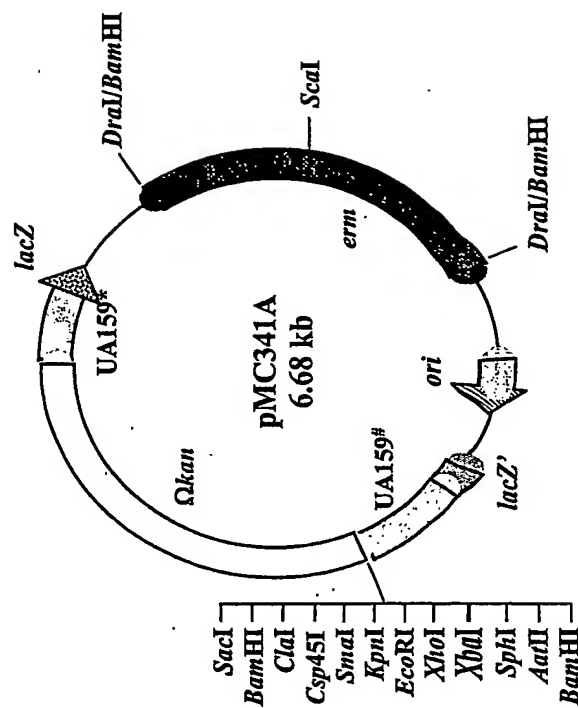
UA159#, intergenic region between *Streptococcus mutans* UA159 *glmS* and *mtlA1*.
UA159*, intergenic region between *mtlD* and *phnA*.

FIGURE 12 A



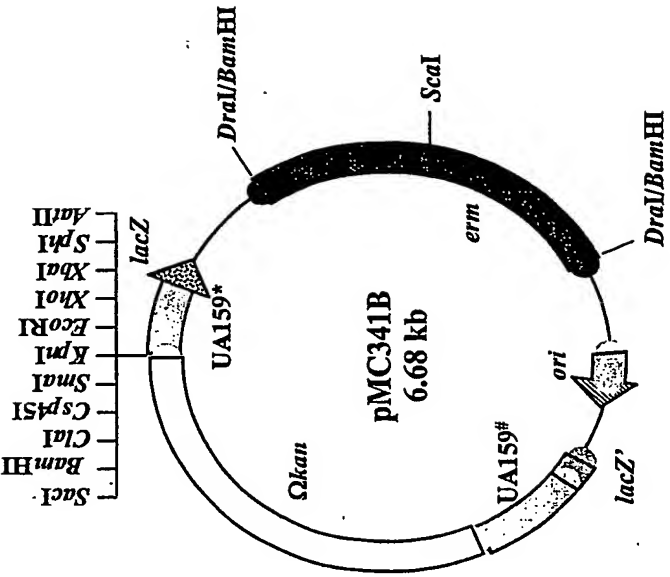
UA159#, intergenic region between *Streptococcus mutans* UA159 *glmS* and *mtlA1*.
UA159*, intergenic region between *mtlD* and *phnA*.

FIGURE 12 B



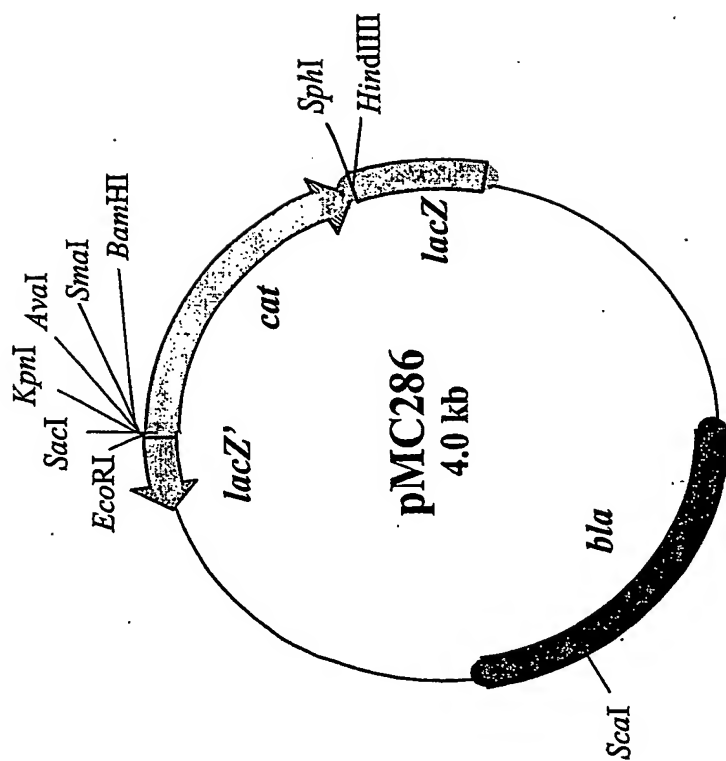
UA159#, intergenic region between *Streptococcus mutans* UA159 *glmS* and *mlA1*.
UA159*, intergenic region between *mlD* and *phnA*.

FIGURE 12 C



UA159#, intergenic region between *Streptococcus mutans* UA159 *glmS* and *mtlA1*.
UA159*, intergenic region between *mtlD* and *phnA*.

FIGURE 12 D



The *cat* gene was amplified from pC194 with a *Bam*HI site immediately 5' to the ATG and a *Sph*I site 3' to the terminator. This PCR product (.76 kbp) was subsequently cloned into pGEM-3Zf(+) at *Bam*HI-*Sph*I site to generate pMC286.

FIGURE 13